

What is claimed is:

1. A method of preventing atherosclerosis in a mammal comprising administering to a mammal an effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of:

- 5 cyano and carboxy derivatives of substituted styrenes; cyclic imides; cycloalkyl amides and cycloalkyl nitrites; aryl amides; 1-oxo-2-(2,6-dioxo-3-fluoropiperidin-3-yl) isoindolines and 1,3-dioxo-2-(2,6-dioxo-3-fluoropiperidine-3-yl) isoindolines; tetra substituted 2-(2,6-dioxopiperidin-3-yl)-1-oxoisooindolines; imide/amide ethers and alcohols; succinimides and maleimides; 1-oxo-and 1,3 dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines substituted with amino in the benzo ring; imido and amido substituted alkanohydroxamic acids; substituted phenethylsulfones substituted to the phenyl group with an oxoisooindine group; 1-Oxo and 1,3 dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines; non-polypeptide cyclic amides; imido and amido substituted alkanohydroxamic acids; and substituted phenethylsulfones.
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2. A method of preventing atherosclerosis in a mammal comprising  
20 administering to a mammal an effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of: 1-oxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline, 1,3-dioxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline and 3-(3,4-dimethoxyphenyl)-3-(1-oxoisooindolin-2-yl)propionamide.

- 25 ~~3.~~ A method of preventing atherosclerosis in a mammal comprising administering to a mammal an effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of thalidomide, its analogs, its hydrolysis products, its metabolites and its precursors.

- 30 4. A method of treating atherosclerosis in a mammal comprising administering to a mammal in need thereof an effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of:

- 35 cyano and carboxy derivatives of substituted styrenes; cyclic imides; cycloalkyl amides and cycloalkyl nitrites; aryl amides; 1-oxo-2-(2,6-dioxo-3-fluoropiperidin-3-yl) isoindolines and 1,3-dioxo-2-(2,6-dioxo-3-fluoropiperidine-3-yl) isoindolines; tetra substituted 2-(2,6-

dioxopiperidin-3-yl)-1-oxoisoindolines; imide/amide ethers and  
alcohols; succinimides and maleimides; 1-oxo-and 1,3 dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines substituted with amino in the benzene ring; imido and amido substituted alkanohydroxamic acids; substituted phenethylsulfones substituted to the phenyl group with an oxoisoindine group; 1-Oxo and 1,3 dioxo-2-(2,6-dioxopiperidin-3 yl) isoindolines; non-polypeptide cyclic amides; imido and amido substituted alkanohydroxamic acids and substituted phenethylsulfones.

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5. A method of treating atherosclerosis in a mammal comprising administering to a mammal in need thereof an effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of: 1-oxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; 1,3-dioxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; and 3-(3,4-dimethoxyphenyl)-3-(1-oxoindolin-2-yl)propionamide.

6. A method of treating atherosclerosis in a mammal comprising administering to a mammal in need thereof an effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of thalidomide, its analogs, its hydrolysis products, its metabolites and its precursors.

7. The method of claims 1, 2, 3, 4, 5, or 6 wherein the atherosclerosis is in the aorta, coronary artery, mesenteric arteries, or carotid arteries.

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8. The method of claims 1, 2, 3, 4, 5, or 6 wherein the atherosclerosis is in the renal arteries.

9. The method of claims 1, 2, 3, 4, 5, or 6, wherein the mammal is a human.

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10. The method of claims 1, 2, 3 wherein the mammal is a human subject and is at risk for complications of atherosclerosis and has one or more of the following conditions: abnormal serum lipid levels, hypertension, cigarette smoking, diabetes mellitus, obesity, physical inactivity, hyperhomocysteinemia and chlamydia pneumoniae infection.

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11. The method of claim 10 wherein the subject has not undergone surgical vascular intervention.

12. The method of claims 1, 2, 3, 4, 5, or 6 wherein approximately .01  
5 mg/kg to 300 mg/kg of body weight is administered per day.

13. The method of claim 12 wherein approximately 0.1 mg/kg to 100  
mg/kg of body weight is administered per day.

10 14. The method of claim 13 wherein approximately 0.5 mg/kg to 50  
mg/kg of body weight is administered per day.

15. The method of claim 14 wherein approximately 1.0 mg/kg to 10  
mg/kg of body weight is administered per day.

15 16. The method of claim 1, 2, 3, 4, 5, or 6 wherein the method of  
administration is oral.

17. A method of inhibiting or preventing restenosis in a mammal  
20 comprising administering to a mammal in need thereof an effective amount of a TNF- $\alpha$   
inhibitor selected from the group consisting of:

25 cyano and carboxy derivatives of substituted styrenes; cyclic imides;  
cycloalkyl amides and cycloalkyl nitrites; aryl amides; 1-oxo-2-(2,6-  
dioxo-3-fluoropiperidin-3-yl) isoindolines and 1,3-dioxo-2-(2,6-  
dioxo-3-fluoropiperidine-3-yl) isoindolines; tetra substituted 2-(2,6-  
dioxopiperidin-3-yl)-1-oxoisindolines; imide/amide ethers and  
alcohols (for example 3-Phthalimido-3-(3',4'-  
dimethoxypheryl)propan-1-ol); succinimides and maleimides; 1-oxo-  
and 1,3 dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines substituted  
30 with amino in the benzo ring; imido and amido substituted  
alkanohydroxamic acids; substituted phenethylsulfones substituted to  
the phenyl group with an oxoisindine group; 1-Oxo and 1,3 dioxo-  
2-(2,6-dioxopiperidin-3-yl) isoindolines; non-polypeptide cyclic  
amides; imido and amido substituted alkanohydroxamic acids; and  
35 substituted phenethylsulfones.

18. A method of inhibiting or preventing restenosis in a mammal comprising administering to a mammal in need thereof an effective amount of a drug selected from the group consisting of: 1-oxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; 1,3-dioxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; and 3-(3,4-dimethoxyphenyl)-3-(1-oxoindolin-2-yl)propionamide so that restenosis is prevented or reduced.

19. A method of inhibiting or preventing restenosis in a mammal comprising administering to a mammal in need thereof an effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of thalidomide, its analogs, its hydrolysis products, its metabolites and its precursors so that restenosis is prevented or reduced.

20. The method of claim 17 wherein approximately .01 mg/kg to 300 mg/kg of body weight administered per day.

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21. The method of claim 20 wherein approximately 0.1 mg/kg to 100 mg/kg of body weight is administered per day.

22. The method of claim 21 wherein approximately 0.5 mg/kg to 50 mg/kg of body weight is administered per day.

23. The method of claim 22 wherein approximately 1.0 mg/kg to 10 mg/kg of body weight is administered per day.

25 24. The method of claims 17, 18 or 19 wherein the treatment begins prior to surgical intervention.

25. The method of claim 24 wherein treatment begins prior to surgical intervention and is continued for about 4 to 12 weeks after the surgical intervention.

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26. The method of claim 24 wherein the treatment begins about 12 hours or less prior to scheduled intervention.

27. The method of claim 25 wherein the treatment begins about 12 hours or less prior to scheduled intervention.

28. The method of claim 24 wherein the surgical intervention is percutaneous coronary intervention, percutaneous transluminal coronary angioplasty, carotid percutaneous transluminal angioplasty coronary by-pass grafting or coronary angioplasty with stent implantation.

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29. The method of claim 24 wherein the surgical intervention is renal angioplasty, peripheral percutaneous transluminal intervention of the iliac, femoral or popliteal arteries or surgical intervention using impregnated artificial grafts.

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30. The method of claims 17, 18, or 19 wherein the surgical intervention is unscheduled and treatment begins at the time of surgery.

31. The method of claims 17, 18, or 19 wherein the surgical intervention is unscheduled and treatment begins at the time of surgery and is discontinued about 4 to 12 weeks after the surgical intervention.

32. A prosthetic device suitable for implantation or use in a mammal wherein said device is coated on at least one surface with a therapeutically effective amount of a TNF- $\alpha$  inhibitor selected from the group consisting of:

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cyano and carboxy derivatives of substituted styrenes; cyclic imides; cycloalkyl amides and cycloalkyl nitrites; aryl amides; 1-oxo-2-(2,6-dioxo-3-fluoropiperidin-3-yl) isoindolines and 1,3-dioxo-2-(2,6-dioxo-3-fluoropiperidine-3-yl) isoindolines; tetra substituted 2-(2,6-dioxopiperidin-3-yl)-1-oxoisoindolines; imide/amide ethers and alcohols; succinimides and maleimides propionate; 1-oxo-and 1,3-dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines substituted with amino in the benzo ring; imido and amido substituted alkanohydroxamic acids; substituted phenethylsulfones substituted to the phenyl group with an oxoisoindine group; 1-Oxo and 1,3-dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines; non-polypeptide cyclic amides; imido and amido substituted alkanohydroxamic acids and substituted phenethylsulfones.

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33. A prosthetic device suitable for implantation or use in a mammal wherein said device is coated on at least one surface with a therapeutically effective amount of a composition comprising: 1-oxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; 1,3-

dioxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; and 3-(3,4-dimethoxyphenyl)-3-(1-oxidoindolin-2-yl)propionamide so that restenosis is prevented or reduced.

34. A prosthetic device suitable for implantation or use in a mammal  
5 wherein said device is coated on at least one surface with a therapeutically effective amount of thalidomide, its analogs, its hydrolysis products, its metabolites or its precursors.

35. The method of claim 32, 33 or 34 wherein the coating comprises a composition containing a pharmaceutically acceptable carrier, said carrier suitable for  
10 coating a prosthetic device.

36. The device according to claims 32, 33 or 34 in which the device is selected from the group consisting of a stent or stent/graft.

15 37. The device according to claims 32, 33 or 34 in which the device is composed of a nonbiodegradable material.

38. The device according to claim 37 in which the nonbiodegradable material is a polyamide, a polyester, a polystyrene, a polypropylene, a polyacrylate, a  
20 polyvinyl, a polycarbonate, a polytetrafluoroethylene, a polymethylmethacrylate, a polyethylene, a poly(ethylene terephthalate), a polyalkylene oxalate, a polyurethane, a polysiloxane, a poly(dimethyl siloxane), a polycyanoacrylate, a polyphosphazene, a poly(amino acid), a ethylene glycol I dimethacrylate, a poly(methyl methacrylate), a poly(2-hydroxyethyl methacrylate), a poly(HEMA), or a polyhydroxyalkanoate compound.

25 39. A method for the production of a prosthetic device coated with a composition comprising compounds which inhibit TNF- $\alpha$  selected from the group consisting of:

30 cyano and carboxy derivatives of substituted styrenes; cyclic imides; cycloalkyl amides and cycloalkyl nitrites; aryl amides; 1-oxo-2-(2,6-dioxo-3-fluoropiperidin-3-yl) isoindolines and 1,3-dioxo-2-(2,6-dioxo-3-fluoropiperidine-3-yl) isoindolines; tetra substituted 2-(2,6-dioxopiperidin-3-yl)-1-oxoisindolines; imide/amide ethers and alcohols; succinimides and maleimides propionate; 1-oxo-and 1,3-dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines substituted with amino in the benzo ring; imido and amido substituted

alkanohydroxamic acids; substituted phenethylsulfones substituted to the phenyl group with an oxoisoinidine group; 1-Oxo and 1,3 dioxo-2-(2,6-dioxopiperidin-3-yl) isoindolines; non-polypeptide cyclic amides; imido and amido substituted alkanohydroxamic acids and substituted phenethylsulfones

5 comprising dipping, spraying, casting, layering or impregnating the device with a suspension of the compounds.

40. A method for the production of a prosthetic device coated with a  
10 composition comprising compounds which inhibit TNF- $\alpha$  selected from the group consisting of: 1-oxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; 1,3-dioxo-2-(2,6-dioxopiperidin-3-yl)-4-aminoisoindoline; and 3-(3,4-dimethoxyphenyl)-3-(1-oxoisindolin-2-yl)propionamide comprising dipping, spraying, casting, layering or impregnating the device with a suspension of the compounds.

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41. A method for the production of a prosthetic device coated with a composition comprising compounds which inhibit TNF- $\alpha$  selected from the group consisting of: thalidomide, its analogs, its hydrolysis products, its metabolites and its precursors comprising dipping, spraying, casting, layering or impregnating the device with  
20 a suspension of the compounds.

42. The method according to claims 39, 40 or 41 in which the device is selected from the group consisting of a stent or stent/graft.

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